

DETONATION OF FIRST THERMONUCLEAR FUSION BOMB



When: November 1, 1952
Where: Eniwetok Atoll, Marshall Islands



BACKGROUND

- Edward Teller (of the Manhattan Project) advocated for a more powerful hydrogen-based alternative to nuclear fission weapon
- Pursuit of hydrogen weapon was stopped after Hiroshima and Nagasaki, but Russian detonation of their own fission warhead spurred Truman to reboot the project
- Along with mathematician Stanislaw Ulam, Teller designs a three-story fusion structure called "Mike" to test the principles of a fusion weapon
- Weapon utilized liquid deuterium which required constant cooling below its boiling temperature of -417.36°F
- When detonated, Mike exploded with a 10.4 megaton yield, destroying the island of Elugelab and generating a fireball three miles wide

IMPORTANCE

- The Teller-Ulam design is the concept behind most of the world's nuclear technology today
- According the physicist Herbert York, "the world suddenly shifted from the path it had been on to a more dangerous one" where the power-limits of the already dangerous fission-device were pushed aside

Citations

- <http://learning.blogs.nytimes.com/2011/11/01/nov-1-1952-first-hydrogen-bomb-test>
- <http://www.pbs.org/wgbh/amex/bomb/peopleevents/pandeAMEX63.html>